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AUTHOR Adkins, Roger L.; Akkihal, Ramchandra G.

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ABSTRACT

This study discusses the migration of people out of West Virginia, a recurring phenomenon through the State's history. The study links outmigration to economic factors and summarizes recent research. West Virginia is a mostly rural state, and it is noted that employment opportunities in rural areas are generally limited. While outmigration often eases unemployment problems, the loss of an area's most skilled workers can make it less attractive to potential businesses, hamper expansion of existing firms, and hasten economic decline. Population changes in different areas of the state are observed: some counties are experiencing growth, others are suffering stagnation. People appear to be moving away from the State's two urban areas to suburban areas, whereas the Eastern Panhandle has shown strong population growth. Rapid growth in southern West Virginia during the 1970s has been reversed, probably due to the boom and bust cycle of the coal industry there. West Virginia has lagged behind the rest of the nation in economic growth for decades. It was the only state where total employment fell significantly from 1982 to 1983. The unemployment rate was about twice the national figure in 1983 and 1984. The outmigration problem, therefore, is seen as part of the larger problem of a poor economy. It is suggested that future federal funding be more concentrated in a minimal number of "growth centers," with an emphasis on education, especially postsecondary education. An upgrading of the entire state educational system and standards is urged. The study includes 27 references, and charts and maps showing counties' population changes are appended. (TES)

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Report Title

Out-Migration and Economic Growth in West Virginia

Prepared By

Roger L. Adkins
Associate Professor of Economics
Marshall University

and

Ramchandra G. Akkihal
Professor of Economics
Marshall University

July 1986

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Center for Regional Progress
Graduate School
Marshall University
Huntington, West Virginia 25701

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Introduction

Migration is a routine and necessary feature of an economic system. In fact, the more dynamic the economy, the greater is the need for the flow of individuals from one place to another. The rise of the United States to the position of the world's leading industrial nation was characterized by several streams of migration. Among these, two have been most notable. First, international migration from widely diverse regions helped to propel development by maintaining a large pool of relatively cheap labor. These immigrants, in turn, became a market for the goods they and others produced. The second stream was less dramatic but over a long period of time has produced a profound change in society. We know this flow as rural-to-urban migration. Observers of these two migrations would generally contend that both resulted in gains for the individuals involved, as well as for society.

The most colorful migration process has been the westward expansion of the frontier. In a sense, much of the first three hundred years of our nation's history has evolved out of this movement of people. An important migration of the twentieth century, though less celebrated, has been the migration of Blacks from South to North. From the past and through the present, we have been a country in which the movement of people has been a common experience. Commentators from European countries often remark with envy on the adaptability of our labor force to a changing economic

environment. Even though smaller geographically, their workers exhibit more resistence to changing their locations.

Yet not all migrations are viewed favorably. The State of West Virginia has had several periods of major out-migrations. In addition, there is a feeling that even when the State was not losing population there was still an out-migration of the better educated individual who could have contributed to the growth of West Virginia if somehow that person had remained. How should we view migration from West Virginia? Is this a process that benefits both the migrant and the State? Is the potential development of the state enhanced or impaired by migration? Should migration be promoted or inhibited? Once our goals are established with respect to migration, what policies will best serve these goals?

This study seeks to answer the questions raised above. No attempt was made to gather primary data for this study given the level of funding for the project. While some national data sets are available on migration, no attempt was made to use such data for two reasons. First, the time between the signing of the contract and the deadline for the project was too brief. Secondly, numerous studies on migration have established several firm conclusions that apply to the Appalachian region which are then easily extended to West Virginia.

The study is divided into two parts. The first part treats various aspects of migration: an economic model of

migration, a review of the literature on migration generally, migration literature concerning West Virginia and Appalachia. The second part of the study proceeds on the assumption that the reduction of out-migration from West Virginia is a goal of the State of West Virginia and its people. Some suggestions for economic growth are offered which seeks to satisfy that goal.

An Economic Model of Migration

Should the price of any good or resource differ between two markets at some time, then economic forces will tend to move the different prices toward equality over time. Any price differential that remains reflects transportation costs. Since the wage rate is the price of labor, we should expect that wages for the same class of workers should become equal after the market has made sufficient adjustments. The adjustment process we are most concerned with is that of migration.

Where wages are low relative to other labor markets, workers will respond by moving to those places where wages are higher once they become aware of the gap in wages. This process has several consequences. Where wages are low, the out-migration of workers reduces the supply of labor to that market causing wages to rise. Those workers who do not migrate will experience rising wages which improves their economic welfare. Where in-migration occurs, the supply of labor grows causing wages to decline. As long as a wage difference exists between two regions, we expect labor to migrate from the low-wage area to the high wage area.

The above analysis implicitly assumes that workers are all alike in terms of skills, education, age, etc. Where knowledge about employment opportunities elsewhere are available and is inexpensive to acquire, the migration model outlined above will generate regional wage equality. In the real world we discover that knowledge with respect to job

opportunities often will be severely limited, and, consequently, costly to obtain. Workers are not homogeneous. Individuals differ considerably in numerous personal characteristics that make some more prone to migrate than others. We will examine some of the more important characteristics that influence the migration decision below. Regardless of the many differences among workers that may exist, the information on migration clearly confirm that people continue to move from low-wage regions to high-wage regions.

The human capital model offers another insight into the decision by a worker to relocate. This approach concentrates on both the costs and benefits of changing location. There are several types of costs. First, one must acquire information as to available job opportunities in the area(s) selected for migration. Once an area has been selected there can be considerable costs in moving family and/or belongings. There is also the psychic cost of leaving family, friends, and the community. On the other side of the equation are the expected benefits of migration. A potential migrant must compare the costs of moving with the expected benefits of a move over some period of time. If the individual perceives the benefits to be greater than the costs, then he moves. This economic model focuses on the individual and the manner in which decisions are made. A very simple but important conclusion emerges from the analysis. Namely, a rational individual will move only if he or she expects to better his

or herself. Migrants may later regret their decision to move, yet they moved only because they anticipated an improvement in their economic well-being.

Summary of Recent Research on Migration

Several personal characteristics have been identified and continually verified in numerous studies as being associated with the migration decision. Among these are age and education. With respect to age, the probability of migration diminishes as workers grow older. Migration tendencies climb during the early to mid-twenties and fall sharply until the individual reaches retirement (Greenwood, 1985, 523). Several explanations are possible. First, there are costs to migration. As a consequence, older workers will have a shorter time span within which to earn a return from their decision to migrate. Secondly, job security and the existence of family ties will tend to discourage the older worker from moving (Greenwood, 406).

The tendency to migrate increases with the level of education. Information pertaining to employment and job opportunities are believed to be positively associated with additional education. According to Greenwood,

> [E]ducation may also reduce the importance of tradition and family ties and increase the individual's awareness of other localities, with the consequence that the forces that hold him to his present locality are weakened (Greenwood, 406).

The less educated are the most likely of migrants from their home state to return to that state within a year or so of their leaving. Not surprisingly, "the most highly educated are the likeliest to move quickly <u>onward</u>."

It seems clear that age is the best indicator of who will migrate. On the other hand, within an age group, one

will find that education is the best predictor of who will move. As Table 1 demonstrates, the greater the degree of education, the greater the propensity to migrate. A college education, however, sharply increases the likelihood of a move. The explanation is straight forward: the labor markets for individuals who are college educated are generally regional or national in scope in relation to those who are less educated (Ehrenberg and Smith, 309).

Distance also impacts upon the migration decision. Information about a potential area being considered diminishes with distance, but the costs associated with moving increases with distance. Psychic costs seem to rise with distance since the opportunities of making a return visit are reduced. It should be stressed that distance has more than spatial dimension. Distance becomes a proxy for time and cost per mile traveled. Interstate highways have only marginally reduced the number of highway miles between two locations; however, their reduction in the time and cost of travel (fewer meals and lodging expenses) are significant. Improved airline travel has had the same impact. Thus, improvements in both travel and communications have reduced the importance of geographic distance.

Contrary to what one would expect, most studies on migration, until more recently, concluded that economic conditions at the origin (place from which migration occurred) were not important determinants in the decision to migrate. High wages and rapid employment growth in the areas

TABLE 1

Annual Migration Rates for Men and Women 30-34, By Educational Level, 1975-1980 (percent)

Educational Level (in years)	Moving Between Counties Within States		Moving Between States	
	Men	Women	Men	Women
0-8	11.7	10.0	6.3	7.6
9-11	12.7	10.1	12.0	8.7
12	13.8	12.6	10.1	10.6
13-15	15.6	15.8	14.2	16.0
16	19.9	19.0	18.8	17.7
17 or more	18.0	19.8	25.0	21.6

Source: U.S. Bureau of the Census, Geographical Mobility: March 1975 to March 1980, Population Characteristics, Series P-20, No. 368, Table 24.

to which the migrant located were thought to be the only important economic variables. However, the availability of new data sets and the application of econometric techniques have validated several earlier works which contended that home economic conditions did, in fact, influence out-migration (Miller, DeVanzo, Schlottmann, and Herzog, 1981 and 1982).

In their study of economic forces at the origin, Schlottmann and Herzog came to the following conclusions:

> these conditions are shown to affect significantly the mobility decisions of both potential primary and repeat migrants. For both the primary and repeat migration decision, the probability of out-migration is lower from areas that have experienced relatively high employment growth in the past. Further, the complementary decision to return home among repeat migrants is positively augmented by rapid employment growth in states of birth. It is interesting to note that the primary economic determinant of out-migration rates in the study by Miller where economic conditions at the origin are significant, is the rate of growth of employment. In addition, primary out-migration is increased by a high population-employment pressure index, defined as the population of working age (14 or over) divided by total employment. Finally, both primary and repeat out-migration are positively augmented in areas with high fiscal pressure induces (state and local taxes relative to personal income). Thus, home economic factors are important to the migration decision, and concurrently, the level of labor force out-migration is influenced by economic conditions at the origin (Schlottman and Herzog, 1982, 958).

DaVanzo has considerably added to our knowledge of the variables influencing who migrates. Her empirical work has substantiated many propositions and has added new insights at the same time. For instance, those families with heads seeking employment are more inclined to relocate than

families whose heads are not involved in a job search. Table 2 shows that:

> [A]mong persons in the labor force looking for work, the unemployed are usually considerably more likely to move than the employed, confirming hypothesis B. The sizes of marginal increases in the migration probability due to unemployment or job search while employed tend to become smaller, both absolutely and relatively, as the average distance of the move becomes shorter. This implies that persons looking for work are more likely to migrate long distances than persons who are not. A notable, but reasonable, exception is for employed searchers without recent migration experience, who appear to be the most likely to search and move to nearby labor markets (DaVanzo, 507).

One interesting finding was that families whose head was not unemployed were not sensitive to unemployment rate in their area when they considered possible migration (DaVanzo, 507). Not surprisingly, families in high employment areas were more likely to move on than where such rates were low. She concludes, "Thus, we see that the 'push' of origin unemployment rates is effective, but only for those who are without jobs; the aggregate effects appear to have been eclipsed by the absence of 'push' for the majority who have jobs" (DaVanzo, 508-09. Hence local economic conditions (unemployment rates at the origin) do impact on out-migration; however, the impact is felt only within the group most affected by these rates---the unemployed (DaVanzo, 505).

Other studies have found that the propensity to migrate is linked to the occupation of the individual. The rate of migration of blue-collar workers is significantly less than that of white-collar workers. Among the latter, professional

Table 2

Effects of Unemployment and
Job Search on Migration Propensities

Dependent Variable (type of migration)	Increase In Migration Propensity Due To Unemployment: Longer-Term Resident	Increase In Migration Propensity Due To Unemployment: Recent Migrant
Interdivisional	.0989 (3.89)	.282 (4.16)
Noncontiguous State	.117 (4.90)	.381 (6.56)
Interstate	.101 (3.57)	.330 (4.78)
Noncontiguous County	.0640 (1.77)	.254 (3.87)
Intercounty	.0469 (1.09)	.212 (2.73)

Dependent Variable (type of migration)	Increase In Migration Propensity Due to On-The-Job Search: Longer-Term Resident	Increase In Migration Propensity Due to On-The-Job Search: Recent Migrant
Interdivisional	.0265 (1.38)	.233 (6.71)
Noncontiguous State	.0253 (1.56)	.217 (6.99)
Interstate	.0138 (0.72)	.171 (4.65)
Noncontiguous County	.0492 (2.15)	.0331 (0.99)
Intercounty	.0611 (2.26)	-.00511 (-0.13)

Note: The first 2 columns show how the probability of migration differs for a family with an unemployed head compared with one whose head is not looking for work, when other variables (except Previous Migration) are held constant at their means. The last 2 columns show how much more (less) likely (in probability increments) a family whose head is employed but looking for work is to migrate compared with one whose head is not looking for work. The first and third columns show these differences for families who have lived in the area (division, state, county) of their current (1971) residence for more than 3 years (i.e., since 1968 or before). Columns 2 and 4 show these differences for families who moved at least once (interdivisionally, interstate, intercounty) between 1968 and 1971.
From coefficients of equations (1b), (2)-(5) in table 2; t-statistics are in parentheses.

Source: Julie DaVanzo, "Does Unemployment Affect Migration? Evidence from Micro Data," Review of Economics Statistics LX (November 1978): Table 1.

and technical workers possess the highest migration rates (Herzog and Schlottmann, 1984, 45). These authors, in their empirical investigation found that:

> Personal characteristics of individuals at-risk to migration are shown to be significant determinants of migration. In this respect, the age selectivity of migration is confirmed for all occupations. Thus, the significance of the age-migration relationship is not affected by the occupational composition of a state's labor force. On the other hand, the education selectivity of migration, often observed in empirical studies of labor mobility (in which occupation is not explicitly recognized), appears to represent, in part, an occupational status phenomenon (Herzog and Schlottmann, 1984, 49).

The major findings of their study are given in Table 3.

Government policies at the state and local level can influence migration decisions as well. States where individuals receive above average unemployment compensation and various other forms of income transfers generally will encounter lower levels of out-migration. Home ownership rates (high in West Virginia) also decrease migration flows. Some contend that more and more individuals now place greater emphasis on environmental quality as they consider possible migration (McConnel and Brue, 386).

Table 3

Binary Logit Estimates of Impacts On
The Labor Force Migration Decision By
Occupation, 1965-1970

Variable	Occupation		
	Professional & Technical	Other White Collar	Blue Collar
Constant	1.134 (.559)	1.284 (.946)	-2.053*** (-1.739)
Personal Characteristics Age	-.079*** (-5.178)	-.067*** (-7.138)	-.074*** (-8.982)
Years of Education	.019 (.360)	.037 (.911)	.061* (1.698)
Widowed, Divorced, Seperated	.738 (1.107)	.273 (.658)	.861*** (2.825)
Unemployed in 1965	1.273*** (2.142)	1.148*** (2.921)	1.430*** (4.802)
Prior Mobility	1.335*** (4.621)	1.277*** (6.452)	.981*** (5.705)
Economic Conditions Unemployment Rate	.374* (1.851)	.337** (2.469)	.201* (1.790)
Average Earnings	-5.45** (-2.058)	-.535*** (-2.778)	-.169 (-1.104)
Average Probability of Migration	.108	.092	.067
Increase in Average Probability of Migration Due to Unemployment:	.148	.093	.119

The asymptotic t-value for each coefficient is given in parentheses. All significance tests are for the hypothesis that the coefficient is different from zero. ***, **, and * indicte significance at the .01, .05, and .10 levels, respectively.

Eight intercept shift terms were included in the analysis but are omitted from Table 2. These represent the nine Census divisions (New England excluded).

Entered relative to the U.S. average.

The average probability of migration for each occupation was computed from the estimated equations using mean values of the respective samples. The increase in the average probability of migration due to unemployment was computed by setting the value of the dichotomous variable representing unemployment equal to one (with all other variables equal to their mean values) and subtracting from this probability the respective average probability.

Source: Henry W. Herzog, Jr. and Alan M. Schlottman., "Labor Force Mobility in the United States: Migration, Unemployment, and Remigration," International Regional Science Review 9 (1984): Table 2.

Out-Migration and Depressed Areas*

A depressed area is easily recognized by its above average unemployment rate; however several other characteristics are notable: a limited range of economic activities, basic industries in decline, low-skilled or inflexible labor forces and inefficient infrastructures. Without the intervention of public policy, these areas seem destined to stagnate or experience further decline. Two basic approaches are available to aid depressed regions. First, new firms can be encouraged to open facilities. Secondly, a market adjustment solution (described at the beginning of this paper) would result in workers exiting the labor-surplus region for more attractive areas. Our interest at this time centers on the second approach.

Parr seeks to examine the impact of out-migration on the labor supply and level of unemployment in a depressed region. To do so, he assumes a depressed area where the unemployment rate is high and the demand for labor is stagnant.

> If the level of net labor out-migration over a period of time is greater than the net local additions to the labor force, then movement of labor out of the community may ease the unemployment difficulties by reducing the size of the labor force. There are three possible paths by which this may be achieved: (1) if all the labor moves out is unemployed; (2) if all the new entrants onto the community labor-force such as school-leavers move from the community immediately, the vacancies created by retirements from the employed

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*Unless indicated otherwise, this section draws from "Out-Migration and the Depressed Area Problem," by John B. Parr. Page numbers appear in parentheses.

> labor-force can be filed from the ranks of numbers the unemployed; or (3) similarly, if the labor that moves was formerly employed. (Very frequently in depressed areas it is the employed labor, being wage-conscious and mobile that is most likely to move) (151).

The last two paths imply that the unemployed possess sufficient skills and education to assume job vacancies as they develop. In any community, we would expect that net out-migration would be the result of each of these three alternatives. Should a region be experiencing a decreasing demand for labor.

Since our concern in this report is out-migration from West Virginia, we need particularly to note Parr's observation on the favorable outcome of migration from a rural depressed area. Our state's population is approximately two-thirds rural which is one of the highest percentages in the nation. "The existing lack of alternative employment possibilities and the general unsuitability of most rural areas as locations for industry tend to limit the range of possible adjustments to high unemployment to out-migration" (152). Where the principal industry experiences long-term contraction, out-migration can ease the unemployment problem.

As we observed earlier, migration from a labor market perspective, means workers flowing from low- to high-wage regions. In terms of the human capital model, an individual who migrates does so only because he expects the benefits of a move to exceed the costs of doing so. Hence, migration can

be generally considered to be beneficial for the individual and the depressed area. Yet there may be serious consequences of out-migration to the economy of the depressed region. The most important consequence centers on the demand for labor. The results of several of the studies cited earlier emphasized that migration is highly selective.

> Generally the migrants represent the best workers (who may not even be unemployed), the younger elements (good trainee material) and would be local administrators and entrepreneurs: in other words, the area is sapped of its vital and most needed elements. Also, the age distribution of the population may well become skewed in favor of the older groups (152-53).

The loss of skilled labor poses several problems by making an area less attractive to potential firms, as well as, hampering the expansion of existing firms.

If firms that close down or experience significant long-term declines in employment are in the export sector (e.g., coal and numerous manufacturing operations within West Virginia), and if the employment decline cannot be offset, then serious subsequent employment problems may present themselves. In particular, the decline in employment and associated income will tend to produce a multiplier effect with negative a impact on employment in the trade and service sector. In effect, a given level of out-migration produces reverberations on the area economy that increases unemployment to the extent that the unemployment rate may not fall (or insignificantly if at all).

When migration causes the region's population to decline, the other problems surface. Parr argues that:

> The tax base will be decreased and this is likely to mean higher average levels of taxation because of the need to maintain certain social overhead services requiring the same expenditure regardless of population levels. Alternatively, with a decreased tax income in the community, there might be a deterioration in the standard of services that can be provided. Increased taxation or a poor quality of public services are additional factors likely to diminish the area's locational attractiveness to new industry. They might also cause an increase in costs to existing industry and cause firms, particularly marginal ones, to leave the area, causing unemployment problems similar to those referred to in the preceding paragraph (153).

A declining economy can produce a conservative climate among financial institutions within the region. Thus, credit for new and existing enterprises may not be as plentiful and/or more expensive. This promotes a further dampening of economic activity in the region.

Parr and others suggest that, while we may observe migration flows from depressed areas as predicted by economic theory, the magnitude of these flows may be less than what would be expected. Miller argues that depressed areas have a very low proportion of new arrivals and most inhabitants have strong roots. The vitality of these roots tends to offset other variables that promote out-migration. Labor market adjust proceeds slowly in this context (Miller, 397-98 and 403). In their study of in-migration to fast growing states,

Ballard and Clark found that in-migrants do not necessarily come from the correct regions (labor surplus areas); instead, migrants were coming from other growing areas. They concluded that "interregional migration may not be efficient in allocating labour from depressed to rapidly growing regions" (Ballard and Clark, 226).

Thus, we have some evidence that the flow of surplus labor from the Appalachian region may be less than optimal from the standpoint of the economic model developed at the beginning of this study. On the other hand, since population in the depressed region would not be declining as rapidly, some of the less desirable scenarios described by Parr may not develop or, at least, in a more gradual fashion. Parr considers another factor which may inhibit the efficient allocation of labor from depressed areas. This is the phenomenon of return migration. Parr (156) cites several examples where the creation of new jobs in a community within a depressed area induced the return of former migrants back to their home communities. Others maintain close ties with local state employment agencies so that they can be made aware of potential employment opportunities. To the extent that out-migrants are poised to return to their home areas as employment expands, then employment in the depressed area will increase but the unemployment rate may change but

little.*

A study of return migration for Eastern Kentucky is illustrative of the migration process and the problems presented to a depressed area. This study found that return migrants generally were those people who were less well prepared to earn a living or adjust to an urban environment. "Thus, return migration has the effect of screening out the most potentially productive in the community of origin" (Deaton and Anschel, 189). They conclude by stating that:

> An implication of this reserch is that the migrants most likely to return upon creation of new employment opportunities in the home environs may be those with minimal skills and education. Rural industrialization programs designed to attract highly skilled migrants back to their home communities may be less successful than those which attract the less skilled. Moreover, because return migrants are responsive to increased employment opportunities, establishment of new industry will not reduce rural unemployment in proportion to number of jobs created, at least in the short run. Once the backlog of potential returnees has been eliminated, reduction of rural unemployment will occur in porportion to the jobs created (Deaton and Anschel, 190).

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*The authors received a flyer from the United States Department of Agriculture at the time of the writing of this report advertising new publications. One of these reports offered evidence to support this statement to the effect:

> Overall employment growth in a rural area will probably not benefit all households or residents in that area. Although employment grew rapidly in a nine-county area of south-central Kentucky during 1974-79, only 18% of the households had members who took advantage of the new jobs.

"Will Employment Growth Benefit All Households"? A Case Study in Nine Nonmetro Kentucky Counties, by Donald K. Larson and Claudia K. White. RDRR-55. January 1986.

Population Changes in West Virginia

The population of West Virginia was relatively stable between 1950 and the latest data as of 1984; however, as Table 4 indicates, there were significant changes during this interval. The collapse of employment in the coal industry is closely related to the decline in state population. In 1950, employees of coal and coke firms within the state numbered 119,568. In 1960, the number was 48,698 and, in 1970, 45,261 were so employed. As Parr suggested, the worst possible case for a depressed region involves an absolute drop in the region's population. As we can see, our state has passed through such a period and now enjoys some growth in population. Table 5 shows that population growth is projected to continue through the year 2000, but, as a percentage of total U.S. population, West Virginia continues to show decline. In 1973, West Virginia had nine percent of total U.S. population whereas in the year 2000 this will decline to about seven percent.

The growth of population within the state occurred along with out-migration. Table 6 shows the high rate of net-migration for the period 1950-1970. While the authors were not able to secure data for the 1970-1980 period, we can report that net migration for the 1980-84 period was -1.6. West Virginia was one of 21 states with net out-migration during this recent period.

Table 4

Census Counts 1950-1980,
West Virginia

Year	Population	Percentage Change From Past Census
1950	2,005,552	-
1960	1,860,421	-7.2
1970	1,744,237	-6.2
1980	1,949,644	11.8
1984	1,952,000*	0.1

*Estimated for July 1, 1984

SOURCE: West Virginia Blue Book and Data and Dollar$ (Material given at a Census Bureau Training Course, Marshall University, April 6, 1986).

Table 5

Projected Population (W.Va.) for
1990 and 2000

Year	Population
1990	1,970,000
2000	1,984,000

SOURCE: Kenneth P. Johnson and Howard L. Friedenberg, "Regional and State Projections of Income, Employment, and Population to the Year 2000," Survey of Current Business 65 (May 1985): 39-48.

Table 6

Net Migration from West Virginia
1950-70

1950-60		1960-70	
Number	Rate	Number	Rate
-446,711	-22.3	-259,528	-13.9

SOURCE: Clyde B. McCoy and James S. Brown, "Appalachian Migration to Midwestern Cities," in The Invisible Minority: Urban Appalachians, ed. by William W. Philliber and Clyde B. McCoy (Lexington: The University Press of Kentucky, 1981): p. 36, Table 3.1.

A major contention of this paper is that we need to look beyond what takes place in terms of data for the state. Just as we find growing, stagnant, and contracting regions within the United States, we should not be surprised to find the same situation within West Virginia. Are there county groupings that exhibit low rates of population growth and those that show higher rates of growth of popultion? Only three of the 55 counties have shown consistent changes in population over an extended period. Both Berkeley and Wood Counties have had growing populations since the census of 1950 while McDowell County has continuously lost population since 1960. The remaining counties have had mixed records from one census to another.

Appendix A-1 gives the state populations for 1970 and 1980 with the percentage changes between the two dates. Only three counties lost population between the two census periods: Cabell, McDowell, and Ohio. However, the Huntington-Ashland (KY) Metropolitan Statistical Area grew by (0.9) percent in this period. The City of Huntington (located in Cabell County) declined by 14.3 percent (74,315 to 63,684). It is notable that Kanawha County had a slight growth of population (0.8) percent, but the City of Charleston also experienced a 10.5 percent decline in population (71,505 to 63,968). The Charleston Metropolitan Statistical Area (MSA) grew by (0.5) percent.

Both major metropolitan areas showed only the slightest growth from 1970 to 1980 with central cities in each losing a substantial amount of population. To a large degree, this reflects the shift of population to suburban areas away from the old urban core. For instance, Putnam County, which is part of the Charleston MSA but also on the eastern edge of the Huntington-Ashland MSA (all linked by I-64), had the second highest popultion growth in the state. The average growth rate of population on a county basis was 11.3 percent.

Appendix A-2 shows a map of West Virginia and its counties with the population growth rates for each county. Several interesting observations emerge. First, all of the counties of the Northern Panhandle grew at less than the state average with only Marshall County approaching the state average. The decline of the steel industry which is heavily concentrated in this region seems an obvious factor. Secondly, the Eastern Panhandle has three rapidly growing counties withd Jefferson having the highest growth rate for the state (42.4) percent). The explanation for this is beyond the scope of this study; nonetheless, we can point out that the interstate system of highways has had perhaps a favorable impact on county growth in this area. Interstate 81 runs North-South through Berkeley County and connects with I-70 which runs along the Northern border of the Panhandle. Eastern Jefferson County (Harper's Ferry) is served by a modern highway from the East. It may well be that people have migrated a short-distance into West Virginia from

Maryland and Virginia where they work.

Other less apparent developments are noticeble. From Hardy County in the North to Mercer County in the South, the counties along the border with Virginia have grown faster than the state average but only moderately so. In the interior, along and bordering I-79 North from Charleston, we encounter a string of counties in which population growth was less than the state average. Finally, we observe a number of rapidly growing counties bordering (or near) the most populous counties (Kanawha and Cabell).

In Appendix A-3, we have reproduced populations for the counties for 1981-83 along with the percentage changes for 1980-83. These changes are also presented on the state map in A-4. The Eastern Panhandle along with Hampshire and Hardy Counties continue to exhibit rapid growth. This behavior of population growth may reflect what "Detailed studies confirm that in relation to previous decades, widespread net in-migration to entirely rural counties represents a new, or at least more complex, pattern of regional settlement" (Hansen, 1980, p. 8). All of the counties of the Northern Panhandle now show population decline. Whereas only three counties had declining populations between 1970 and 1980, eighteen counties lost population between 1980 and 1983. Four North-Central counties lost population and many counties bordering these showed only slight growth. With two exceptions, the remaining counties were located in southern West Virginia.

In summary, the Eastern Panhandle and near-by counties (Grant, Hardy, Hampshire, and Mineral) have shown strong population growth over the 1970-83 period. Conditions in the Northern Panhandle have continued to decline. Rapid population growth in southern West Virginia in the 1970s has now been reversed. The boom and bust cycle of coal has to be a major factor in this process. The two most populous counties (Kanawha and Cabell) remain stagnant while their bordering counties exhibit varying degrees of growth or modest declines.

Regional Economic Development

West Virginia and the Appalachian region have been lagging behind the rest of the nation for decades. We have reasons to be concerned that our State may be on the verge of falling even further behind the rest of the nation. We have long been aware that we have been too dependant on the coal industry which is subject to alternating periods of expansion and contraction. As manufacturing grew within the State in the post-World War II period, West Virginia became more diversified. However, the late 1970s and 1980s have witnessed numerous economics changes that have severely impacted on this segment of the State's economy as well. A recent government publication reviewed changes in regional unemployment in the United States. (A long paragraph was devoted to West Virginia---no other State received such attention.) That paragraph is reproduced below:

> West Virginia recorded the highest State unemployment rate in both 1983 and 1984 and was one of the six States that showed no jobless rate improvement between 1982 and 1984. In some respects, the problems in West Virginia resemble those of the neighboring heavily industrialized States, but West Virginia also has unique long-term structural problems. Mining (primarily coal mining) accounted for about one-fourth of nonagricultural wage and salary employment in West Virginia immediately after World War II. As the demand for coal decreased and the industry became increasingly mechanized, mining employment fell preciptiously---dropping more than 60 percent from the early 1950s to 1963. The falloff in mining jobs bottomed out in the mid 1960s, and thereafter nonfarm employment increased for several years. However, employment peaked in West Virginia in 1979 and dropped in each of the succeeding

> 4 years. Several States with concentrations of older basic industries also experienced job declines between 1979 nd 1982, but West Virginia was the only State where total employment fell significantly from 1982 to 1983. Between 1979 and 1983, the number of jobs in the goods-producing sector in West Virginia plummeted 30 percent, compared with 12 percent nationally. As a result, the State's jobless rate, which was about 1 percentage point above the U.S. rate in 1979, soared to approximately twice the national figure in 1983 and 1984 (Shank, 22).

Given the above statement and the history of the State economy in this century, the out-migration from West Virginia is easily understood. The migration of population from West Virginia should not be considered the problem; rather, it is the symptom of a larger problem---which is the poor performance of our state's economy in relation to that of the rest of the nation. Migration functions to improve the allocation of human resources among labor markets both in terms of time and space as individuals move to locations where they seek to better their well-being. Migration can serve an important role by shifting a portion of the labor force where a surplus exists to areas in which the demand for labor is greater. Only economic growth can stem the flow of migration from the state.

What follows in this report can be generally thought of as a general set of suggestions for the development of the State economy. The explicit assumption we proceed from is that West Virginians desire an economic enviornment that offers sufficient opportunities to its young people in which they are not compelled to leave the State when they seek

employment. In short, West Virginians desire an economic environment where their children have the opportunity to consider employment within the area before they consider migrating as opposed to migrating to seek employment. Little, if any, of what we suggest could be considered novel. We expect that some of what we advocate may be controversial. But the more attention directed to this issue now may result in concrete policies which will be beneficial in the years to come. The assumed goal of reducing the flow of out-migration rests on growth of jobs. Job growth must precede the decline in the out-flow of individuals.

The Appalachian Regional Development Act of 1965 created the Appalachian Regional Commission (ARC). This body has guided and coordinated efforts to promote regional development through a growth center strategy approach. Such a policy endeavors to promote more efficient use of the regions resources by focusing government aid in central cities within a multicounty labor market area (Lewis and Prescott, 57).

> Presumably the concentration would have a greater impact on regional development than the more haphazard distribution of these programs in smaller communities. The encouragement of centralized population growth may result in agglomeration economies which will stimulate further development (Lewis and Prescott, 57).

A growth center has a large population and is linked with other regions by a balanced and modern transportation system. In our view, a critical element of a growth center in today's economy would be a solid (but more desirable, an

outstanding) educational system capped by a university within close proximity. The post-secondary institution would best serve the purpose of development if it had a faculty and resources in the sciences, engineering and business fields. The growth center offers entertainment opportunities, cultural events, and other amenities not possible in small towns and rural areas.

As federal support diminishes for regional growth activities, an increasing burden falls on state and local government. Given that regional development commissions have been undertaken to aid relatively poor areas, it is evident that resources will be acutely scarce for such efforts. It becomes paramount that the state select a minimal number of growth centers in order to achieve the greatest impact of minimal resources.

The significant political pressure that would exist to include more areas are recognized. One of the failures of the ARC was the tendency for the political process to expand the number of counties that qualified as requiring aid without a proportionate increase in funding to support these areas. Too few dollars were spread over too wide an area. West Virginia's Development Plan for 1978 identified 16 primary and 46 secondary growth centers. One study found that non-highway ARC expenditures were very equally distributed over the State (Cloutier, 16-17).

Our first proposal calls for a minimal number of growth centers to receive the bulk of available funding.

Development resources should flow to non-growth centers only under the most pressing circumstances and after the most careful consideration. The goal is to initiate or quicken the development of a growth center so as to create new jobs. Migration within the State can fill job openings. The techniques of "equal aid to all" or of helping the "worst cases" seem doomed to failure. Once again we stress that successful use of development funds requires tht limited resources be applied to a limited area or projects. The Economic Development Administration has acknowledged that:

> its experiences "has clearly demonstrated that the piecemeal approach to project funding followed in the past will generally not result in a meaningful increase in the level of an area's economic activity" (Hansen, 1980, 11).

In 1966, Hansen was commenting on the early years of the ARC and the history of the Appalachian economy. He concluded that the region's economy could not be transformed on the basis of sectors dominant at that time (coal, timber, and agriculture). Instead, he argued that future growth must be based on "significant attraction of other industries, preferably those characterized by relatively high labor intensity and/or relatively high backward and forward linkage effects (Hansen, 1966, 5). To promote this desired outcome, the ARC has emphasized a high percentage of expenditures in the form of economic overhead capital (EOC). This "includes highways, bridges, harbors, power, and other activities primarily oriented toward the support of directly productive activities or toward movement of economic goods." On the

other hand, the ARC has given little emphasis to social overhead capital (SOC). This includes schools, hospitals, and recreation areas (Hansen, 1966, 5). Hansen argues that the greatest needs of lagging areas is in SOC expenditures.

The importance of SOC spending has been accentuated by Wray in his examination of lagging regions in England. He asks:

> [S]hould we have put so much effort into solving the problems of areas and so little into tackling the problems of people who live there; should we have put so much faith in physical investment and paid so little attention to human resources (Wray, 467).

While recognizing the need to lure new firms into an area as well as making necessary economic overhead investment, Mawson emphasizes the human element (management, education, initiative, leadership) which has slighted.

> No matter how modern the factory, the machines must be used efficiently, the workforce must be co-operative and well managed, and there must be a demand for its products. The key to regional growth is held by individuals, in their role as managers, decision takers and entrepreneurs, not by machines. The main focus of an effective long term economic strategy for problem regions must therefore be investment in human capital, notably the attraction and retaining of people with business talent at every level and in every type of organization, including those who can successfully manage existing businesses as well as those can create a thriving business from scratch (Wray, 469).

The literature on the role of education in economic development is extensive. The economics profession has been stressing the importance of investment in people (human capital investment) as the primary source of growth. Where economists tend to disagree, relates to how much of our

growth can be attributed to this factor; however, in case after case, human capital investment (formal education, formal training, and on-the-job training) is thought to explain most of our growth performance.

As we view the State economy today, we find the term "Old Industrial Area" very appropriate for West Virginia. Steiner describes an area such as this as having an economic base stretching into the last century with a few limited sectors. Other characteristics include:

> a strong concentration of a few industries, a small number of big firms, an above average wage level, and a small portion of the qualified service sector. In addition to these economic indicators further elements may be added: a low mobility, a pronounced consciousness of status among workers, and strong union representation (Steiner, 387).

If West Virginia is going to grow relative to the rest of the nation (to close the gap between itself and the more prosporous regions), it must break-out of the mold of an "Old Industrial Area." There is precedent for this. In the mid-1970s, Massachusetts had one of the highest unemployment rates in the ntion. Today, the state's unemployment rate is the second lowest. In fact, the New England region has recently experienced a comeback while portions of the Sunbelt (notably, Texas, Louisiana, and Oklahoma) today are facing severe problems due to their heavy reliance on the oil industry. What accounts for New England's revival?

> It is by now generally accepted that New England's "economic miracle" has come about in large part because of the quality of its human capital. For generations New Englanders have invested heavily in

> public education with the result that the regional work force is literate, trainable, and retrainable. By this standrd, the Sun Belt's near-term future appears far from promising (Weinstein and Gross).

One of the authors of this report recently noted that for 1982-83, not one of the Sunbelt states exceeded the national average per pupil expenditures for private and secondary schools. West Virginia was also below the national average. In short, we have the worst case of a Snowbelt economy and a Sunbelt educational system (Adkins). We strongly believe that there is no real hope of economic development in West Virginia without substantial improvement in the performance of the educational system at every level. A firm will not want to transfer workers to a location where the children of employees must enter inferior schools. Firms today, more than ever, need to locate where they can call on local technical expertise of colleges and universities. More importantly, firms must have a skilled and trainable labor supply to recruit from. West Virginia is deficient in all of these respects.

It must be stressed that location of new enterprises may have little direct impact on reducing unemployment among the local labor force if the members of that labor force do not have the necessary skills. A good example of this occurred when Kiser Aluminum and Chemical Corp. located a new plant at Ravenswood in 1956. The company sought to maximize hiring standards were that the applicant be 18 years of age, an eighth grade education (a high school diploma preferred), and

no serious physical handicaps. When plant operations commenced in 1957, most local job applicants could not meet these specifications. As news of job vacancies in Ravenswood spread to other parts of the country, an influx of migration took place---many were former residents of this area. Kaiser did not lower its standards because of the large pool of outside labor that did meet and surpass the minimal standards. Over time skill requirements rose at the plant, by 1967 the uneducated could expect to hold only 15 percent of all jobs. The researcher who studied this problem concluded that the establishment of a large production operation in a rural area can create opportunities for under educated workers; nevertheless, migrants will take jobs when the labor force is largely uneducated or over-age (Gray). Recall the note on page 21 referring to a similar situation recently in Kentucky.

Hence, our second, but most important, recommendation is for the State to commence a major effort of up-grading the entire educational system throughout West Virginia. A minimal goal would be to have the State achieve average national standards as soon as possible. The long term goal would be to surpass national standards. A related recommendation would be to push educational goals more rapidly in the few growth centers selected. The object here would be to make these centers as attractive as possible in a short period of time to potential firms. Also, existing firms can take advantage of greater educational capabilities

for their growth needs.

It is likely that, in the short run, the increasing level of educational attainment will produce a larger pool of that highly mobile group of the young and educated. Thus, there would be an increase in out-migration; however, Hansen states there is a strong tendency for Appalachians to move to migration centers within Appalachia (Hansen, 1972, 516). If growth can be sparked within the selected areas, an efficient job information system within the State may function to bring about greater intrastate migration to these centers. In the long run, successful growth will reduce the loss of West Virginians to other states.

To maximize the number of jobs filled by West Virginia citizens requires that an agency of State government (e.g., the Department of Labor) forecast and monitor the type of jobs likely to be created. A highly flexible educational system could respond by increasing the numbers of people who could fill new jobs. One general type of program would have area vocational schools and community colleges contract firms coming into the State to train workers specifically for that firm.

If the objective of state policy is to improve the well being of its citizens, then we would first advocate raising the educational standards of the State's population. By itself, this approach can be expected to bring some benefits in terms of economic development. The primary result will be greater out-migration since we will have a larger pool of the

very mobile young and educated. If the objective of State policy is both to improve the well being of its citizens while retaining a larger proportion of the population (i.e., reduce out-migration), then education, while a necessary condition to do so, will not be sufficient by itself.

We have advocated a strategy of promoting State growth which relies on the use of but a few growth centers so as to maximize the impact of limited resources. The maximum effect of what we have proposed may not occur without other important changes. While these other changes are beyond the scope of this study, they deserve some brief mention. In particular, much attention has been directed to the tax structure and labor climate in West Virginia. It is not our intention to make specific proposals; instead, we wish to point out that West Virginia is competing with other states and nations for the location of firms. To be successful, it becomes essential to offer an environment for business that is as good, if not better than, that of other political entities.

Once the "business climate" is perceived as being more favorable, then the attributes of the State economy (location near major markets, abundant water, available energy, quality

of life) will serve to promote growth.* The problem becomes shifting the structure of the West Virginia economy toward that of the states that have been most successful in generating employment. We do not want to imply that the State economy should move toward what is popularly termed "high technology" industry. Using a broad definition, high tech industries will constitute only a small proportion of the new jobs that appear through 1995. High tech jobs are growing at a faster rate than job growth generally, but six of ten of these jobs are locted in the most populous states (Riche, et. al, 50). The maximum employment effect will occur when jobs are created that closely match the labor supply skills of underemployed and unemployed workers in the region where a firm expects to locate. Otherwise, in-migration will fill most of the job openings. Growth will impact the unemployment of the region only slightly.

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*Business climate is an elusive concept and can include dozens of items. USA Today conducted a survey of 81 chambers of commerce in 19 states considered to be in the Sunbelt as to what factors were considered important in attracting new firms. The most important factors are listed here with the percentage favoring in parentheses: favorable labor-management relations (70%), market access (60%), quality of higher education (69%), recreational opportunities (69%), access to interstate highways (69%), quality of secondary education (64%), access to a skilled labor pool (59%), quality of roads (59%), favorable tax structure (57%), and low cost electricity (51%). Note that warm winter weather is not high on this list.

We feel tht West Virginia has the potential to grow and eventually reduce the out-migration of its citizens, but only if the conditions for growth are created and nurtured. These efforts will require hard choices and sacrifice but they can succeed.

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APPENDIX

CENSUS COUNTS

Population of Counties: 1980 and 1970

Counties	1980	1970	Percent Change, 1970 to 1980
The State	1,949,644	1,744,237	11.8
Barbour	16,639	14,030	18.6
Berkeley	46,775	36,356	28.7
Boone	30,447	29,118	21.2
Braxton	13,894	12,666	9.7
Brooke	31,117	30,443	2.2
Cabell	106,835	106,918	— 0.1
Calhoun	8,250	7,046	17.1
Clay	11,265	9,330	20.7
Doddridge	7,433	6,389	16.3
Fayette	57,863	49,332	17.3
Gilmer	8,334	7,782	7.1
Grant	10,210	8,607	18.6
Greenbrier	37,665	32,090	17.4
Hampshire	14,867	11,710	27.0
Hancock	40,418	39,749	1.7
Hardy	10,030	8,855	13.3
Harrison	77,710	73,028	6.4
Jackson	25,794	20,903	23.4
Jefferson	30,302	21,280	42.4
Kanawha	231,414	229,515	0.8
Lewis	18,813	17,847	5.4
Lincoln	23,675	18,912	25.2
Logan	50,679	46,269	9.5
McDowell	49,899	50,666	— 1.5
Marion	65,789	61,356	7.2
Marshall	41,608	37,598	10.7
Mason	27,045	24,306	11.3
Mercer	73,942	63,206	17.0
Mineral	27,234	23,109	17.9
Mingo	37,336	32,780	13.9
Monongalia	75,024	63,714	17.8
Monroe	12,873	11,272	14.2
Morgan	10,711	8,547	25.3
Nicholas	28,126	22,552	24.7
Ohio	61,389	63,439	— 3.2
Pendleton	7,910	7,031	12.5
Pleasants	8,236	7,274	13.2
Pocahontas	9,919	8,870	11.8
Preston	30,460	25,455	19.7
Putnam	38,181	27,625	38.2
Raleigh	86,821	70,080	23.9
Randolph	28,734	24,596	16.8
Ritchie	11,442	10,145	12.8
Roane	15,952	14,111	13.0
Summers	15,875	13,213	20.1
Taylor	16,584	13,878	19.5
Tucker	8,675	7,447	16.5
Tyler	11,320	9,929	14.0
Upshur	23,427	19,092	22.7
Wayne	46,021	37,581	22.5
Webster	12,245	9,809	24.8
Wetzel	21,874	20,314	7.7
Wirt	4,922	4,154	18.5
Wood	93,648	86,818	7.9
Wyoming	35,993	30,095	19.6

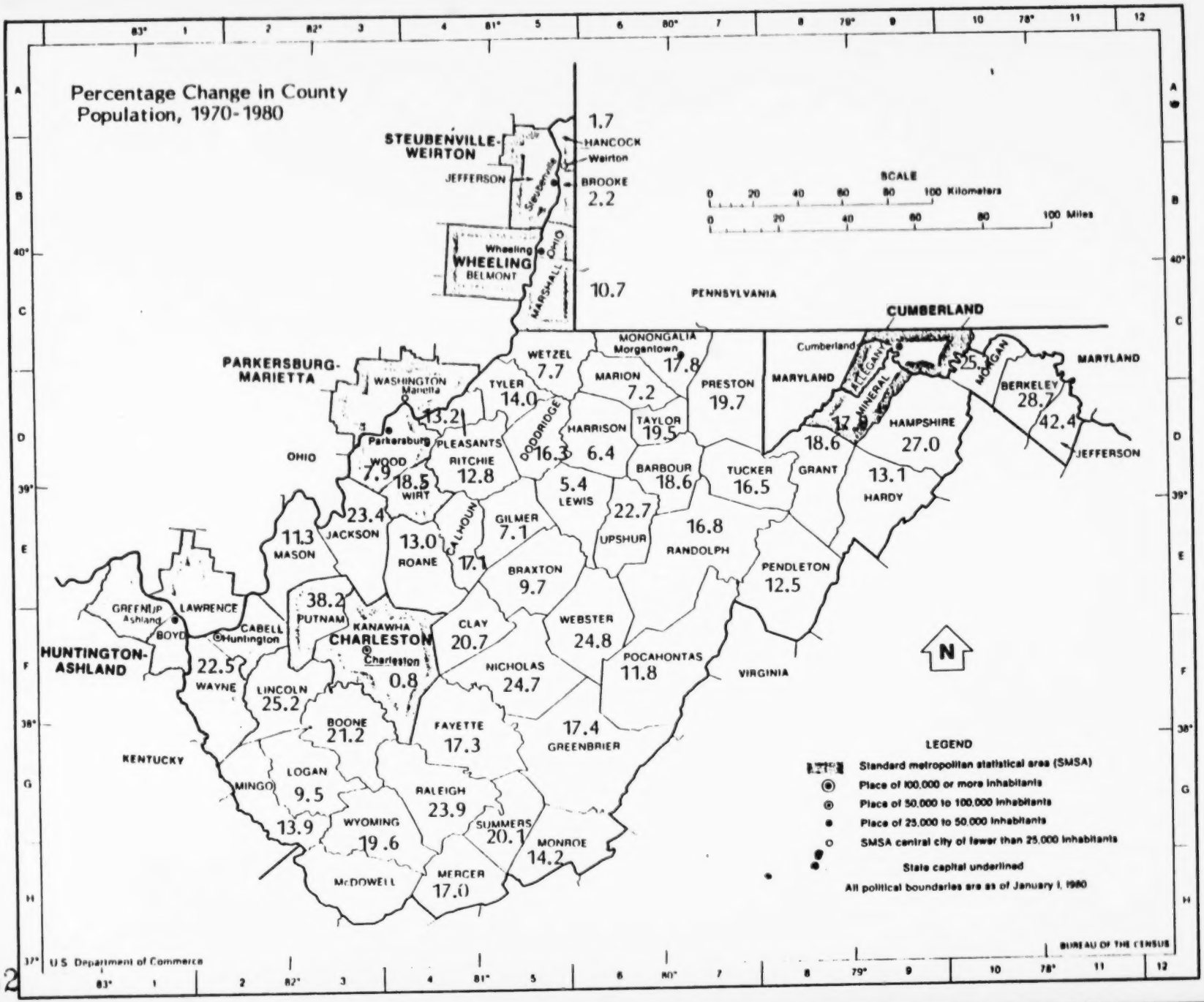

Percentage Change in County Population, 1970-1980
STEUBENVILLE-WEIRTON
JEFFERSON
1.7
HANCOCK
Weirton
BROOKE
2.2
Wheeling
WHEELING
BELMONT
OHIO
MARSHALL
10.7
PENNSYLVANIA
SCALE
0 20 40 60 80 100 Kilometers
0 20 40 60 80 100 Miles
CUMBERLAND
Cumberland
MARYLAND
MINERAL
MORGAN
25.
BERKELEY
28.7
42.4
JEFFERSON
PARKERSBURG-MARIETTA
WASHINGTON
Marietta
WETZEL
7.7
TYLER
14.0
MONONGALIA
Morgantown
17.8
MARION
7.2
PRESTON
19.7
13.2
Parkersburg
PLEASANTS
DODDRIDGE
16.3
HARRISON
6.4
TAYLOR
19.5
17
18.6
HAMPSHIRE
27.0
OHIO
WOOD
7.9
18.5
WIRT
RITCHIE
12.8
5.4
LEWIS
BARBOUR
18.6
TUCKER
16.5
GRANT
13.1
HARDY
23.4
JACKSON
11.3
MASON
CALHOUN
13.0
ROANE
17.1
GILMER
7.1
22.7
UPSHUR
16.8
RANDOLPH
PENDLETON
12.5
BRAXTON
9.7
GREENUP
Ashland
LAWRENCE
38.2
PUTNAM
CABELL
Huntington
BOYD
KANAWHA
CHARLESTON
Charleston
0.8
CLAY
20.7
WEBSTER
24.8
HUNTINGTON-ASHLAND
22.5
WAYNE
LINCOLN
25.2
NICHOLAS
24.7
POCAHONTAS
11.8
VIRGINIA
N
BOONE
21.2
FAYETTE
17.3
17.4
GREENBRIER
KENTUCKY
LOGAN
9.5
MINGO
13.9
RALEIGH
23.9
WYOMING
19.6
SUMMERS
20.1
MONROE
14.2
McDOWELL
MERCER
17.0
LEGEND
Standard metropolitan statistical area (SMSA)
Place of 100,000 or more inhabitants
Place of 50,000 to 100,000 inhabitants
Place of 25,000 to 50,000 inhabitants
SMSA central city of fewer than 25,000 inhabitants
State capital underlined
All political boundaries are as of January 1, 1980
U.S. Department of Commerce
BUREAU OF THE CENSUS

Table 1. Estimates of the Population of West Virginia Counties: July 1, 1981, 1982, and 1983

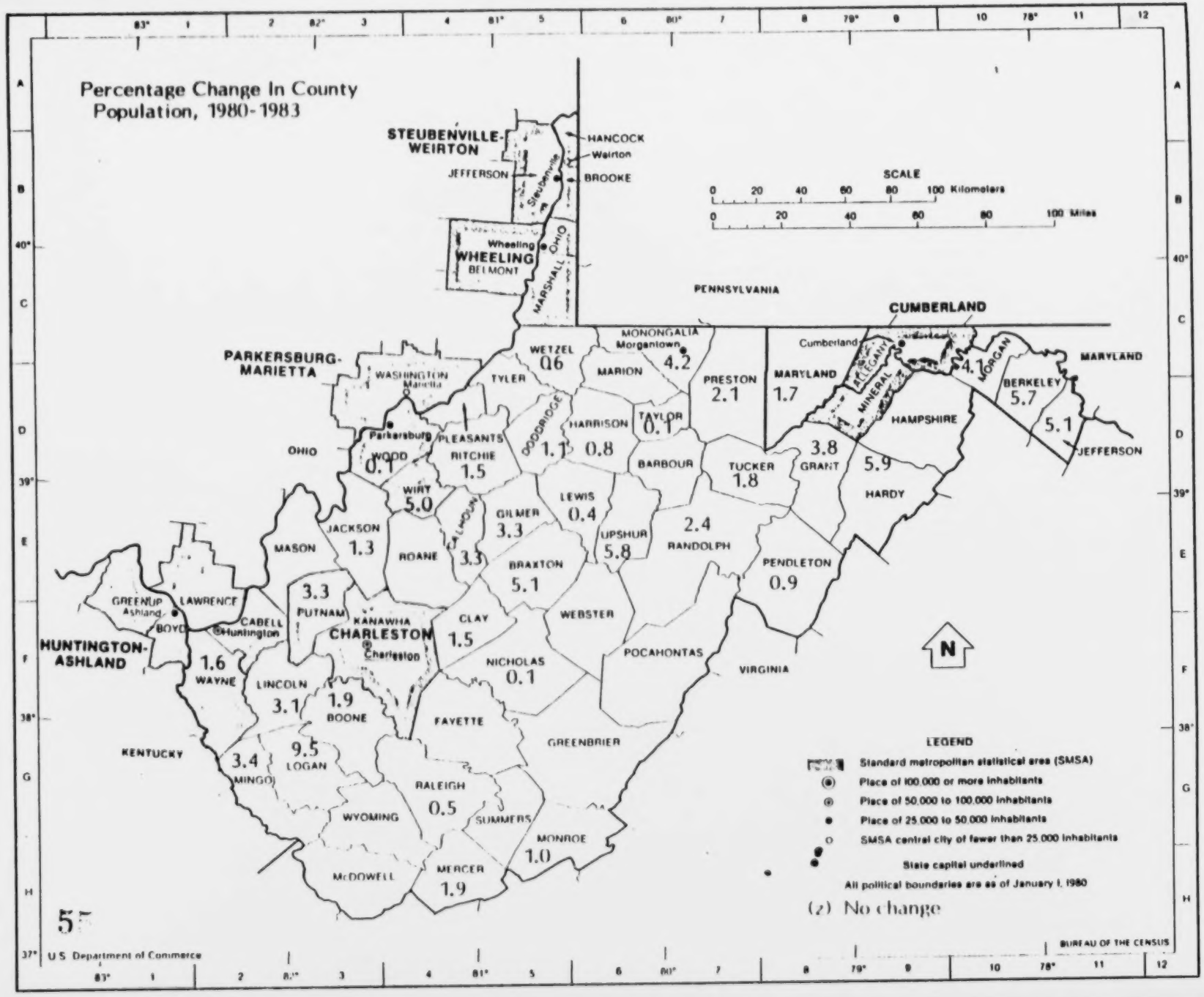
(State estimates are shown to the nearest thousand, county estimates to the nearest hundred)

County	July 1, 1983	July 1, 1982	July 1, 1981	April 1, 1980 (census)	Change, 1980-83		Components of change, 1980-83[1]			
					Number	Percent	Births	Deaths	Net migration	
									Number	Percent
West Virginia	1,945,000	1,960,000	1,960,000	1,950,183	15,000	0.8	91,000	62,000	-14,000	-0.
Barbour	16,800	16,700	16,700	16,639	-100	-0.3	800	600	-200	-1.
Berkeley	49,700	48,400	47,700	46,775	2,700	5.7	2,300	1,400	1,800	3.
Boone	31,000	30,700	30,500	30,447	600	1.9	1,400	900	(Z)	(Z
Braxton	14,600	14,400	14,300	13,894	700	5.1	700	500	600	4.
Brooke	30,400	30,800	31,400	31,117	-700	-2.3	1,400	1,000	-1,000	-3.
Cabell	106,800	106,200	107,500	106,835	(Z)	(Z)	4,200	3,200	-1,000	-0.
Calhoun	8,500	8,500	8,400	8,230	300	3.3	500	300	100	1.
Clay	11,400	11,400	11,400	11,265	200	1.5	700	600	-100	-1.
Doddridge	7,500	7,500	7,600	7,433	100	1.1	1,000	800	-100	-1.
Fayette	57,800	57,300	57,700	57,863	-100	-0.2	2,400	1,800	-600	-1.
Gilmer	8,400	8,700	8,700	8,334	300	3.3	400	300	100	1.
Grant	10,600	10,500	10,400	10,210	400	3.8	400	300	300	3.
Greenbrier	37,200	38,900	37,500	37,663	-500	-1.3	1,900	1,500	-900	-2.
Hampshire	15,600	15,500	15,100	14,867	700	4.9	700	400	500	3.
Hancock	40,100	40,400	40,700	41,033	-1,000	-2.3	1,400	1,100	-1,300	-3.
Hardy	10,600	10,200	10,200	10,030	600	5.9	600	300	500	5.
Harrison	78,400	78,000	78,100	77,710	600	0.8	3,200	2,500	-100	-0.
Jackson	26,200	26,400	26,400	25,794	400	1.5	1,300	800	-100	-0.
Jefferson	31,800	31,100	30,900	30,302	1,500	5.1	1,400	800	900	2.9
Kanawha	229,300	230,800	231,500	231,414	-2,100	-0.9	9,600	6,800	-4,900	-2.1
Lewis	18,900	18,900	18,800	18,813	100	0.4	900	700	-200	-0.9
Lincoln	24,400	24,100	23,800	23,675	700	3.1	2,400	700	-1,000	-4.1
Logan	51,400	51,000	50,800	50,679	700	1.3	3,600	2,400	-400	-1.1
McDowell	48,400	48,600	49,000	49,899	-1,500	-0.3	2,400	1,400	-2,500	-4.9
Marion	65,200	65,600	65,600	65,789	-600	-0.9	2,500	2,000	-1,100	-1.7
Marshall	41,300	41,100	41,300	41,608	-300	-0.8	1,900	1,300	-1,000	-2.3
Mason	26,900	27,100	27,300	27,045	-100	-0.5	1,500	1,000	-600	-2.3
Mercer	75,300	75,400	74,600	73,871	1,400	1.9	3,200	2,300	600	0.8
Mineral	27,700	27,700	27,700	27,234	500	1.7	1,300	900	(Z)	0.1
Mingo	38,600	37,900	37,500	37,336	1,300	3.4	2,100	1,200	300	0.9
Monongalia	78,200	77,600	76,400	75,026	3,200	4.2	3,200	1,900	1,900	2.5
Monroe	13,000	13,000	12,900	12,873	100	1.0	700	500	-100	-0.4
Morgan	11,200	11,100	10,900	10,711	400	4.1	700	500	300	2.1
Nicholas	28,200	28,500	28,400	28,126	(Z)	0.1	1,900	1,000	-700	-2.4
Ohio	61,200	61,200	61,300	61,389	-200	-0.3	2,100	2,100	-300	-0.4
Pendleton	8,000	7,900	7,900	7,910	100	0.9	400	300	(Z)	-0.1
Pleasants	8,100	8,100	8,100	8,236	-100	-1.7	500	300	-300	-4.0
Pocahontas	9,700	9,600	9,700	9,919	-300	-2.7	700	700	-300	-2.5
Preston	31,100	31,000	30,900	30,460	600	2.1	1,400	800	100	0.3
Putnam	39,400	39,000	38,600	38,181	1,300	3.3	1,600	900	400	1.0
Raleigh	87,200	87,200	87,000	86,521	400	0.5	3,500	2,400	-700	-0.8
Randolph	29,400	29,200	29,100	28,734	700	2.4	1,400	900	300	0.6
Ritchie	11,600	11,700	11,700	11,442	200	1.5	700	500	(Z)	0.1
Roane	15,800	16,100	15,900	15,952	-100	-0.7	1,300	900	-400	-2.7
Summers	13,600	13,900	16,000	13,875	-200	-1.5	800	700	-400	-2.3
Taylor	16,600	16,600	16,600	16,584	(Z)	0.1	700	600	-200	-0.9
Tucker	8,900	8,800	8,700	8,675	200	1.8	400	400	100	1.
Tyler	11,300	11,400	11,400	11,320	-100	-1.0	500	400	-200	-2.0
Upshur	24,800	24,300	24,200	23,427	1,400	5.8	1,100	700	900	3.8
Wayne	46,800	46,300	46,500	46,021	700	1.6	1,900	1,100	(Z)	(Z)
Webster	11,300	11,900	12,200	12,245	-400	-3.0	600	400	-600	-5.
Wetzel	22,000	21,900	22,000	21,874	100	0.6	1,100	700	-300	-1.
Wirt	5,200	5,000	5,100	4,922	300	5.0	500	300	(Z)	0.1
Wood	93,700	93,400	93,900	93,623	100	0.1	3,800	2,400	-1,300	-1.4
Wyoming	35,900	36,000	35,800	35,993	-100	-0.4	1,600	800	-900	-2.6

Z Less than 50 persons or less than 0.05 percent.

[1]Births and deaths are based on reported vital statistics from April 1, 1980, to June 30, 1983. Net migration is the difference between net change and natural increase.

Source: U.S. Department of Commerce, Bureau of the Census, Local Population Estimates, Series P-26, No. 83-48-C (August 1985).


Percentage Change In County Population, 1980-1983
STEUBENVILLE-WEIRTON
JEFFERSON
HANCOCK
Weirton
BROOKE
Steubenville
Wheeling
WHEELING
BELMONT
MARSHALL
OHIO
PENNSYLVANIA
CUMBERLAND
Cumberland
MARYLAND
ALLEGANY
MORGAN
BERKELEY
5.7
5.1
JEFFERSON
HAMPSHIRE
MINERAL
4.1
1.7
PARKERSBURG-MARIETTA
WASHINGTON
Marietta
WETZEL
0.6
MONONGALIA
Morgantown
4.2
MARION
PRESTON
2.1
TYLER
Parkersburg
WOOD
0.1
PLEASANTS
RITCHIE
1.5
DODDRIDGE
1.1
HARRISON
0.8
TAYLOR
0.1
BARBOUR
TUCKER
1.8
GRANT
3.8
HARDY
5.9
OHIO
WIRT
5.0
LEWIS
0.4
GILMER
3.3
UPSHUR
5.8
RANDOLPH
2.4
PENDLETON
0.9
MASON
JACKSON
1.3
ROANE
3.3
BRAXTON
5.1
WEBSTER
CLAY
1.5
POCAHONTAS
VIRGINIA
GREENUP
Ashland
LAWRENCE
BOYD
CABELL
Huntington
3.3
PUTNAM
KANAWHA
CHARLESTON
Charleston
HUNTINGTON-ASHLAND
1.6
WAYNE
NICHOLAS
0.1
LINCOLN
3.1
1.9
BOONE
FAYETTE
GREENBRIER
KENTUCKY
3.4
MINGO
9.5
LOGAN
RALEIGH
0.5
WYOMING
SUMMERS
MONROE
1.0
McDOWELL
MERCER
1.9
N
SCALE
0 20 40 60 80 100 Kilometers
0 20 40 60 80 100 Miles
LEGEND
Standard metropolitan statistical area (SMSA)
Place of 100,000 or more inhabitants
Place of 50,000 to 100,000 inhabitants
Place of 25,000 to 50,000 inhabitants
SMSA central city of fewer than 25,000 inhabitants
State capital underlined
All political boundaries are as of January 1, 1980
(Z) No change
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U.S. Department of Commerce
BUREAU OF THE CENSUS